

1. (Currently amended) A rail manufacturing method, comprising:

a) hot-rolling a billet into a form of a rail having a high temperature; and  
b) maintaining the rail on a cooling bed in an upright position without a use of both (i) an insulation and (ii) an accelerated cooling procedure, and naturally cooling the rail when a surface temperature of a head of the rail is in a temperature range of approximately 400° C. to approximately 250° C.; and

c) before step (b), maintaining the rail on the cooling bed in the upright position and mechanically restraining a foot of the rail when the surface temperature of the head of the rail is in a temperature range of approximately 800° C. to approximately 400° C.,

wherein the curvature of the rail in a vertical direction can be controlled through a weight of the rail.

2 – 7. (Cancelled)

8. (Currently amended) A ~~The~~ rail manufacturing method ~~according to claim 1~~, further comprising:

a) hot-rolling a billet into a form of a rail having a high temperature;  
b) maintaining the rail on a cooling bed in an upright position without a use of both (i) an insulation and (ii) an accelerated cooling procedure, and naturally cooling the rail when a surface temperature of a head of the rail is in a temperature range of approximately 400° C. to approximately 250° C.; and

d c) before step (b), accelerated cooling the head and a foot of the rail maintained in the upright position ~~when~~ until (i) the surface temperature of the head of the rail reaches a temperature range of approximately 550° C. to 450° C., or (ii) a surface temperature of the foot of the rail reaches a temperature range of approximately 550° C. to 450° C. at a speed of substantially 1° C. per second to 20° C. per second while the foot of the rail is mechanically restrained on the cooling bed by a clamping apparatus,

wherein the curvature of the rail in a vertical direction can be controlled through a weight of the rail.

9. (Original) The rail manufacturing method according to claim 8, wherein one of the surface temperature of the head of the rail which begins the accelerated cooling and the surface temperature of the foot part of the rail which begins the accelerated cooling is the temperature at which a structure of the rail is austenitic.

10. (Previously presented) The rail manufacturing method according to claim 1, wherein, after step (a), the rail is maintained in the upright position until an ambient temperature is reached.

11. (Original) The rail manufacturing method according to claim 10, wherein a cross-sectional shape of the rail is measured online during a conveyance of the rail that has been placed into the upright position after step (a).

12. (Currently amended) The rail manufacturing method according to claim 14, wherein ~~the~~ a length of the rail is between substantially 80 meters and 250 meters.

13. (Cancelled).

14. (Cancelled).

15. (New) The rail manufacturing method according to claim 8, wherein, after procedure (a), the rail is maintained in the upright position until an ambient temperature is reached.

16. (New) The rail manufacturing method according to claim 15, wherein a cross-sectional shape of the rail is measured online during a conveyance of the rail that has been placed into the upright position after procedure (a).

17. (New) The rail manufacturing method according to claim 8, wherein a length of the rail is between substantially 80 meters and 250 meters.